



Massachusetts Bay Transportation Authority

Joint General Manager and Deputy General Manager Remarks

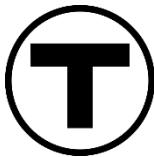
Fiscal and Management Control Board

June 17, 2019



Red Line Derailment Update

- Southbound Red Line derailment occurred around 6 a.m. on Tuesday, June 4, at JFK/UMass.
 - One car of six-car train travelled ~1,837 feet not properly on rails.
- Cause Update: Operator error (including speed), foul play, and infrastructure have been **ruled out**.
- Heavy damage was sustained to track, third rail, signals, switches, and bungalows on impacted portions of the Red Line – work is progressing with incremental repairs being made to resume Red Line service.
- Every effort is being made to expedite the work as safely as possible.
- The incident Red Line car also sustained significant damage and is being inspected.
 - Was re-railed overnight last Tuesday, removed from JFK/UMass on Wednesday, and is currently at Cabot Maintenance Facility.
 - Car is being inspected to determine its role (if any) in the incident.
 - Inspecting car's wheels (replaced in 2014) and other undercarriage infrastructure.
- Comprehensive investigations continue with MBTA staff and Independent Review to determine root cause.
- Working closely with our state and federal regulators, the T will take whatever actions are deemed necessary to enhance the safety and reliability of the transit system



Recovery Plan

- Crews continue to make progress to repair damaged track, third rail, signals, switches, and bungalows on impacted portions of the Red Line.

Recovery Efforts	Completed
All track repair work	✓
Repair and replacement of ~200 feet of third rail	✓
Columbia Junction switch and signal repairs	✓
Wire and power cable repairs	Ongoing
Bungalow and additional signal repairs	Ongoing

- With Columbia Junction switch & signal repairs, Braintree branch service resumed through JFK/UMass on Sunday.
 - Ashmont service is operating and resumed last Tuesday afternoon.

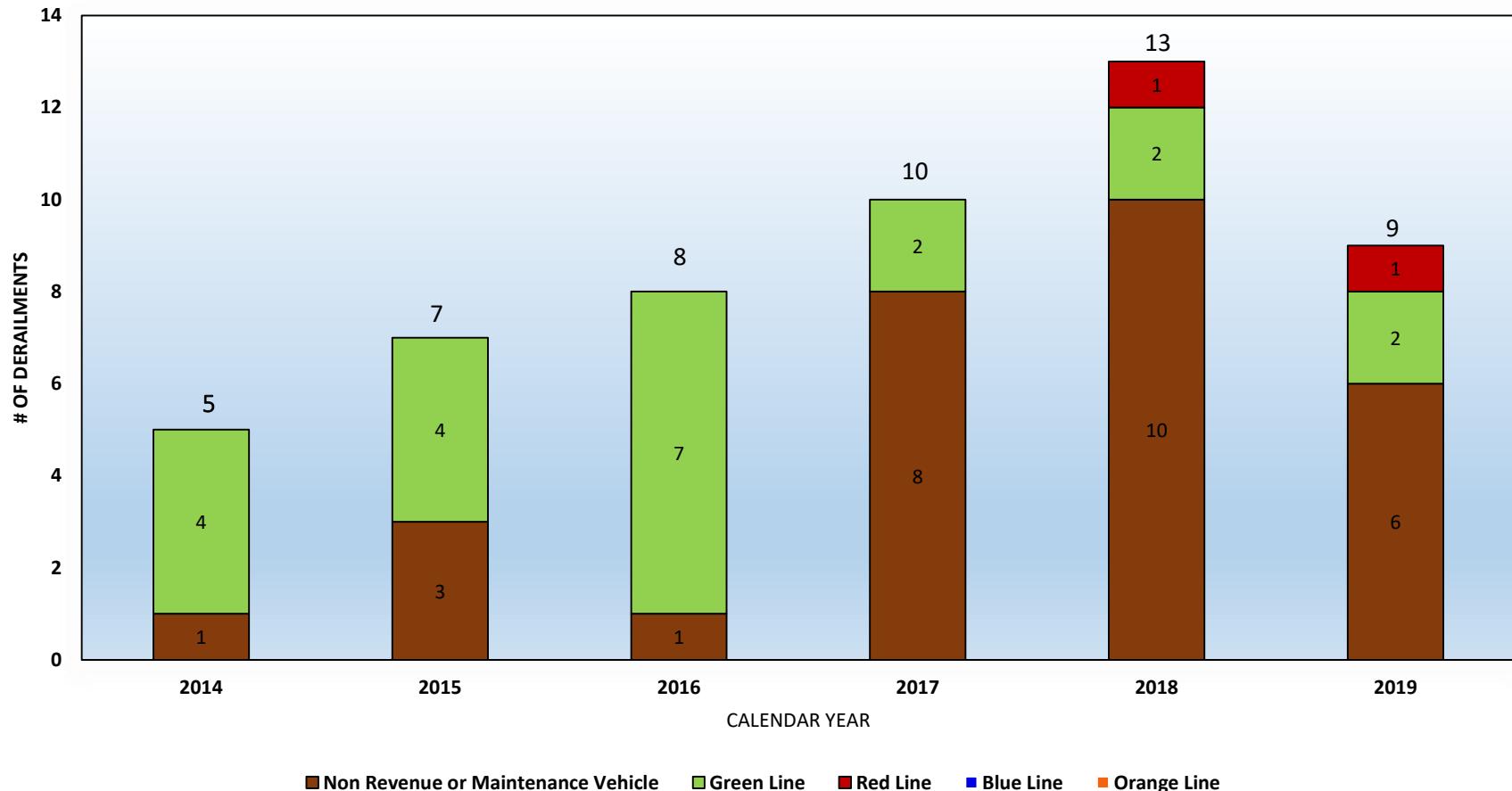


Independent Review

- The MBTA has coordinated with LTK Engineering Services (LTK) to perform a third-party, independent review of MBTA in-service mainline derailments for a two-year period.
 - Includes all Commuter Rail, Light Rail, and Heavy Rail lines.
 - Period from January 1, 2017 to June 11, 2019.
- Will include data collection, analysis, evaluation, and summary.
- LTK will provide a report detailing their analysis and findings within 90 days.
- Report is anticipated to be released within the next three months.

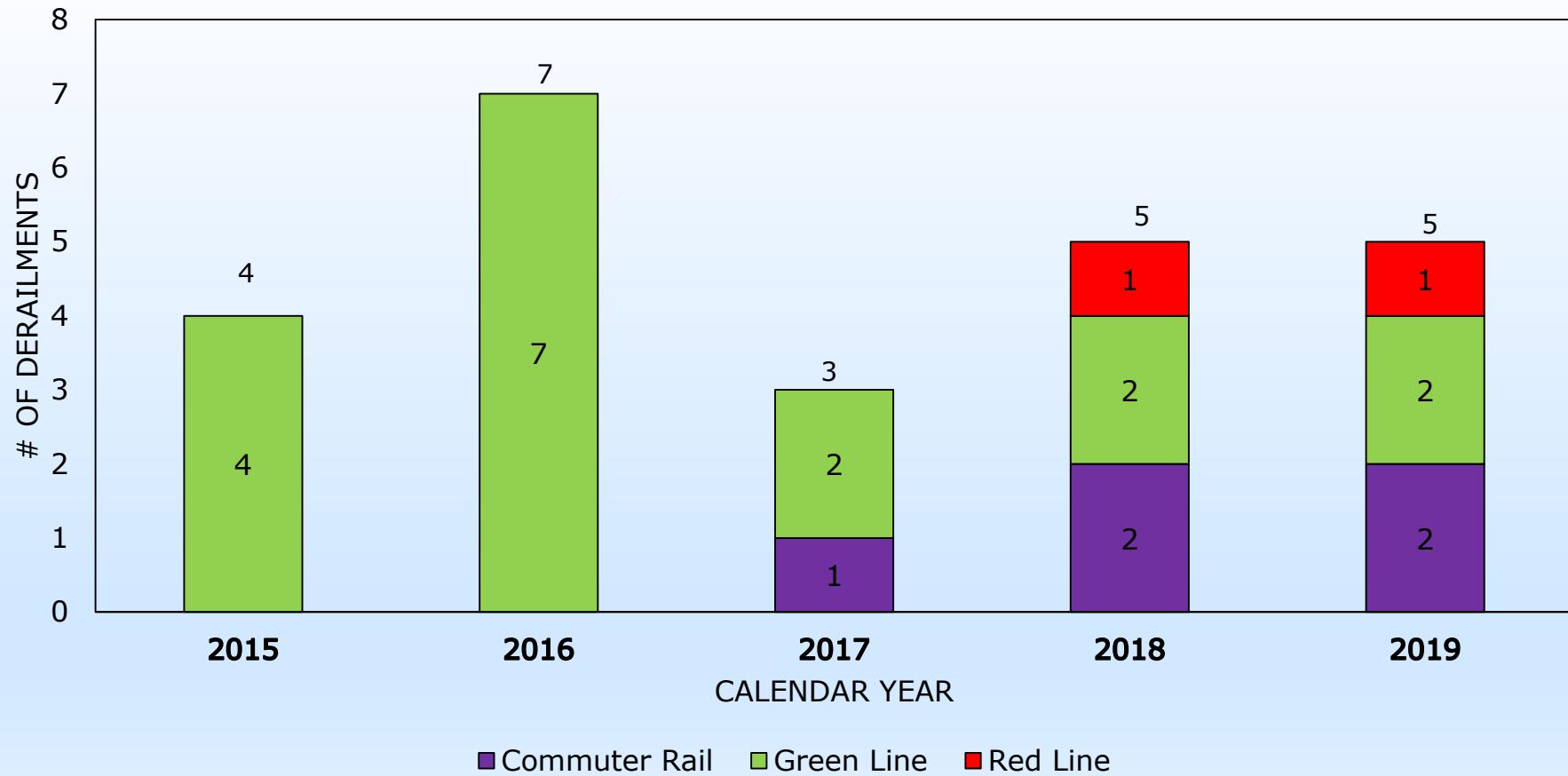


National Transit Database Derailment Reporting 2014-2019





In-Service Mainline Derailments 2015-2019





2017 In-service Mainline Derailments

Date	Line	Location	Cause	Summary of Actions
6/14/2017	Green Line	Summit Avenue and Commonwealth Ave	Human Error: Work Crew removed too many tie fasteners while conducting repairs in between revenue service trains. Rail shifted while the train passed the work crew.	Maintenance of Way procedure and training issued to clarify process for tie plate replacement during service periods.
8/7/2017	Green Line	Naples Road Crossover	Human Error: The inspector did not properly secure the switch prior to directing the train to proceed over it.	Employee management including training
11/20/2017	Commuter Rail	Junction of the Wildcat Branch and the Haverhill Line in Wilmington, MA	Human Error: The conductor did not properly secure the switch prior to the train proceeding over it.	Employee management including training



2018 In-service Mainline Derailments

Date	Line	Location	Cause	Summary of Actions
1/9/2018	Green Line	Newton Centre Station	Weather: Buildup of snow from 1/4/18 snow storm which resulted in an excessive amount of snow accumulating on nearby building. The snow fell and piled directly in front of the train. The derailment occurred as the train attempted to travel over the large snow pile.	MBTA's Transit Facilities Maintenance Department has added the abutter's property to their list of roof structures to remove snow build up after a significant snow event.
2/21/2018	Red Line	Andrew Portal	Infrastructure: A restraining rail bolt failed and became wedged between the restraining rail and running rail. The incident train wheel struck the bolt assembly, causing the wheel to climb and derail. Upon impacting the next switch, the incident train re-railed itself.	Restraining rail bolt installation and inspection procedure modified.
3/8/2018	Commuter Rail	Wilmington Interlocking	Weather: A large fallen tree branch wedged between the train and switch caused the lead control car to derail.	Tree Management program preventatively removes at-risk tree limbs.
8/12/2018	Green Line	Between Riverway and Back of the Hill	Weather: Due to a rush of water from heavy rain conditions, the BWSC system experienced a compression of air and pressurized, causing a manhole cover to dislodge. The cover then fouled the track and caused the trolley to derail.	Solid manhole cover replaced with a vented cover.
11/27/2018	Commuter Rail	West of Waverly Station	Vehicle – After a detailed vehicle engineering inspection, it was determined that the axle bearing failed.	Vehicle inspections modified to increase the interval and process for wheel bearing inspections.



2019 In-service Derailments

Date	Line	Location	Cause	Summary of Actions
2/5/2019	Green Line	Between Brookline Hills and Beaconsfield	Infrastructure: The probable cause of incident was vertical/horizontal deflection between the old and new rail and curvature of the affected track.	MOW procedure modified for re-profiling rail head at transition between new and old rail
4/2/2019	Commuter Rail	FX Interlocking Reading Junction	Under investigation pending results from metallurgical analysis. Human factors as well as track-related causes have been ruled out.	Pending: Proactive locomotive fleet inspection completed
4/9/2019	Commuter Rail	Broad interlocking	Human Error: Passing of stop signal without authority. Conductor did not pass along proper direction to train engineer while "shoving" train for a yard move.	Employee management including training and audits. Procedure modified to only permit similar yard moves under the direction of the dispatcher.
6/8/2019	Green Line	Beacon Junction	Human Error: Operator traveling at excessive speed across the switch.	Pending
6/11/2019	Red Line	JFK/UMass	Under Investigation: Operator error and infrastructure have been determined not to be contributing factors.	Pending: Proactive fleet inspection underway